IN THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

1-24 (Cancelled)

25. **(Currently Amended)** A method for facilitating handover between a base station pair in a communication system comprising:

computing a cost function for the base station pair dependent on a relative received signal strength and an adaptive hysteresis factor dependent on the standard deviation of a residual signal from each base station of the base station pair, **wherein a determination of the adaptive hysteresis factor comprises:**

computing the standard deviation of a residual signal associated with transmission from a first base station to obtain an estimate of the first base station signal strength fluctuation,

computing the standard deviation of a residual signal associated with transmission from a second base station to obtain an estimate of the second base station signal strength fluctuation, and

multiplying the sum of the estimated station signal strength fluctuation of the first and second base station with a scaling factor to obtain the adaptive hysteresis factor; and

selecting a base station from the pair dependent on the cost function and a second factor, wherein the second factor is either base station load or physical distance between a user terminal and the base station.

26. (Previously Presented) The method of claim 25, wherein the physical distance is derived from a propagation delay determined from a relative time-of-arrival of a broadcast message transmitted from the base station synchronized according to a common timing reference.

27.   (Previously Presented) The method of claim 25, wherein the physical distance is derived from a time-of-arrival of a time-stamped message transmitted from the base station.

28.   **(Cancelled)**

29.   **(Currently Amended)** The method of claim [[28]] <u>25</u>, wherein the scaling factor is in the range of 1.5 to 2.

30.   **(Currently Amended)** The method of claim [[28]] <u>25</u>, wherein computing the standard deviation of the residual signal associated with transmission from a base station comprises:

    averaging measured signal strength associated with transmission from the base station over a first interval to obtain a first average;

    averaging measured signal strength associated with transmission from the base station over a second interval to obtain a second average, wherein the second interval is shorter than the first interval;

    subtracting the first average from the second average to obtain the residual signal; and determining the standard deviation of the residual signal.

31.   (Previously presented) The method of claim 30, wherein the first and second intervals each have a fixed length.

32.   (Previously presented) The method of claim 30, wherein the standard deviation is recursively determined over a span of transmission samples from the first base station.

33.   (Previously presented) The method of claim 32, wherein determining the standard deviation includes using a memory factor for weighting.

34.   (Previously Presented) A method for computing an adaptive hysteresis factor to facilitate handover between a base station pair in a communication system comprising:

    computing the standard deviation of a residual signal associated with transmission from a first base station to obtain an estimate of the first base station signal strength fluctuation;

computing the standard deviation of a residual signal associated with transmission from a second base station to obtain an estimate of the second base station signal strength fluctuation; and

multiplying the sum of the estimated station signal strength fluctuation of the first and second base station with a scaling factor to obtain the adaptive hysteresis factor.

35.   (Previously Presented) The method of claim 34, wherein computing the standard deviation of the residual signal associated with transmission from a base station comprises:

averaging measured signal strength associated with transmission from the base station over a first interval to obtain a first average;

averaging measured signal strength associated with transmission from the base station over a second interval to obtain a second average, wherein the second interval is shorter than the first interval;

subtracting the first average from the second average to obtain the residual signal; and

determining the standard deviation of the residual signal.

36.   (**Currently Amended**) A machine-readable medium having stored thereon a set of machine-executable instructions that, when executed by a data-processing system, cause the system to perform a method for facilitating handover between a base station pair in a communication system comprising:

computing a cost function for the base station pair based on a relative received signal strength and an adaptive hysteresis factor dependent on the standard deviation of a residual signal from each base station of the base station pair**, wherein determination of the adaptive hysteresis factor comprises:**

computing the standard deviation of a residual signal associated with transmission from a first base station to obtain an estimate of the first base station signal strength fluctuation,

computing the standard deviation of a residual signal associated with transmission from a second station to obtain an estimate of the second base station signal strength fluctuation, and

multiplying the sum of the estimated station signal strength fluctuation of the first and second base station with a scaling factor to obtain the adaptive hysteresis factor; and

selecting a base station from the pair dependent on the cost function and a second factor, wherein the second factor is either base station load or physical distance between a user terminal and the base station.

37.   (Previously Presented) The machine-readable medium of claim 36, wherein the physical distance is derived from a propagation delay determined from a relative time-of-arrival of a broadcast message transmitted from the base station synchronized according to a common timing reference.

38.   (**Cancelled**)

39.   (**Currently Amended**) The machine-readable medium of claim [[38]] **36**, wherein the scaling factor is in the range of 1.5 to 2.

40.   (**Currently Amended**) The machine-readable medium of claim [[38]] **36**, wherein computing the standard deviation of the residual signal comprises:

averaging measured signal strength associated with transmission from the base station over a first interval to obtain a first average;

averaging measured signal strength associated with transmission from the base station over a second interval to obtain a second average, wherein the second interval is shorter than the first interval;

subtracting the first average from the second average to obtain the residual signal; and

determining the standard deviation of the residual signal.

41.   (Previously presented) The machine-readable medium of claim 40, wherein the first and second intervals each have a fixed length.

42.   (Previously presented) The machine-readable medium of claim 40, wherein the standard deviation is recursively determined over a span of transmission samples from the first base station.

43.   (Previously presented) The machine-readable medium of claim 40, wherein determining the standard deviation includes using a memory factor for weighting.

44.   (**Currently Amended**) A processing unit for facilitating handover between a base station pair in a communication system, comprising:

a base station selection unit to select a base station dependent on the inputs from a received signal strength measurement (RSSI) unit[[,]]**;**

an adaptive hysteresis calculation unit that provides an adaptive hysteresis factor dependent upon the standard deviation of a residual signal from each base station of the base station pair**, wherein the adaptive hysteresis calculation unit determines the standard deviation of the residual signal using a memory factor for weighting ;**[[,]] and

a distance calculation unit.

45.   (Previously presented) The processing unit of claim 44, wherein the base station selection unit selects the base station dependent on a cost function and a base station load input.

46.   (Cancelled)

47.   (Previously Presented) The processing unit of claim 44, wherein the adaptive hysteresis calculation unit recursively determines the standard deviation of the residual signal from each base station of the base station pair.

48.   (**Cancelled**)